

In the Specification

**Please replace the paragraph beginning at page 1, line 15,
with the following rewritten paragraph:**

The drawbacks of this technique are several. 1) Transaction transit times are not available in real time. 2) There is a substantial DASD 86 expense for retaining user log records 88 and a substantial subset of other IMS log records 90 required to make the TTT calculations. 3) Processing the collection of log records 88, 90 requires CPU and memory to make transaction transit time calculations. If memroy memory is exhausted, batch program 92 is terminated and TTT calculation cannot continue. 4) Hooking the IMS sub-system could cause IMS subsystem 106 to abnormally terminate since user code 84 runs as an extension to IMS code 80.

**Please replace the paragraph beginning at page 15, line 16,
with the following rewritten paragraph:**

When the TTT calculator task 112 is called to integrate a log record 104, in-flight transaction cells (ITCs) 116, 184 for the corresponding UOWs 104 are updated with time stamps from log records 104. UOWs are hashed to one of the 1024 hash keys (or multiple of 1024 thereof) to gain access to the UOW Synonym Chain 116 of ITCs. (The multiple is equal to ~~TTTDSPSZ 124.~~ 124.) This results in more hash keys for larger dataspaces thus keeping the UOW lookups fast in a system which is not memory bound and which is, therefore, tuned to optimize CPU usage.) The hash key is used as an index into HIMDITV 114. HIMDITV 114 contains vectors

ITV1...ITVN in an area of data space 110 where synonym chains 116 reside. Synonym chains 116 are made up of linked lists of HIMDITCS 182, 184, one HIMDITC per in-flight UOW and are segregated into 1 megabyte CCPS area extents 176, 178, 180.

Please replace the paragraph beginning at page 17, line 7, with the following rewritten paragraph:

During the integrate call TTTTOLIM 126 is used in a garbage collection process to clean up in-flight UOWs 182, 184 that are incomplete due to some type of unexpected, unanticipated, or new IMS workload that does not generate the expected set of log records 104. The time out value TTTOLIM 126 is compared with the difference between the current time and a UOW's arrival time is taken from the log record time stamp in order to determine if the UOW has "Timed Out." This comparison is done for a chain of ~~in~~-
~~=flight in-flight~~ transaction cells 116 anchored to its in-flight transaction vector 114 each time a new cell 116 is added to a vector's 114 chain. In this way, garbage collection is not done all at once, but one vector 114 at a time.